

# ABSTRACT

An internal combustion engine (1) generates power by burning a mixture of fuel and air in a combustion chamber (3). The internal combustion engine (1) is provided with  
5 a crank angle sensor (14), an in-cylinder pressure sensor (15) detecting an in-cylinder pressure at the time when a crank angle detected by the crank angle sensor (14) reaches a predetermined angle, and an ECU (20). The ECU (20) calculates a combustion rate at predetermined timing  
10 based upon a control parameter which is a product of an in-cylinder pressure detected by the in-cylinder pressure sensor (15) and a value obtained by exponentiating an in-cylinder volume at the timing of detecting the in-cylinder pressure with a predetermined index, and  
15 corrects ignition timing by each ignition plug (7) so that the calculated combustion rate is equal to a target value.